

**SYSTEM, METHOD, AND COMPUTER PROGRAM PRODUCT FOR
UTILIZING PROPRIETARY COMMUNICATION PARAMETERS TO
IMPROVE CHANNEL EFFICIENCY IN A DOCSIS-COMPLIANT
BROADBAND COMMUNICATION SYSTEM**

ABSTRACT OF THE DISCLOSURE

A system, method and computer program product that provides improved bandwidth utilization in a DOCSIS-compliant broadband communication system. The system includes a cable modem termination system (CMTS) and a cable modem that support at least one proprietary communication parameter associated with bandwidth utilization that is not defined by, or encompasses values that are not provided for by, the DOCSIS specification. The proprietary communication parameter may include a modulation rate, a base rate, or an alpha value that denotes excess bandwidth associated with Nyquist filtering. The execution of a handshaking protocol and the assignment of the cable modem to a DOCSIS logical channel that supports proprietary features facilitate communication of the proprietary communication parameter between the CMTS and the cable modem.